

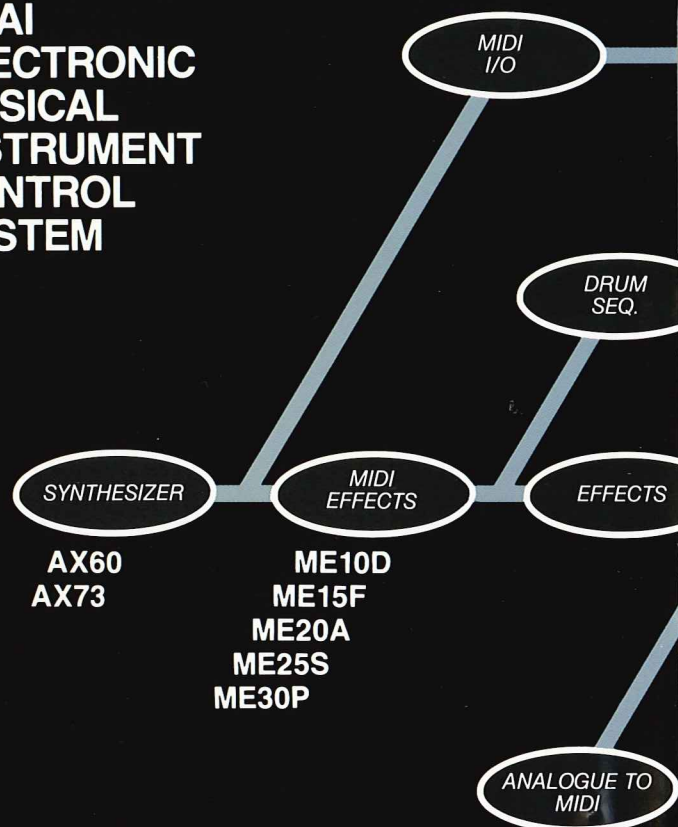
**AKAI**  
*professional*

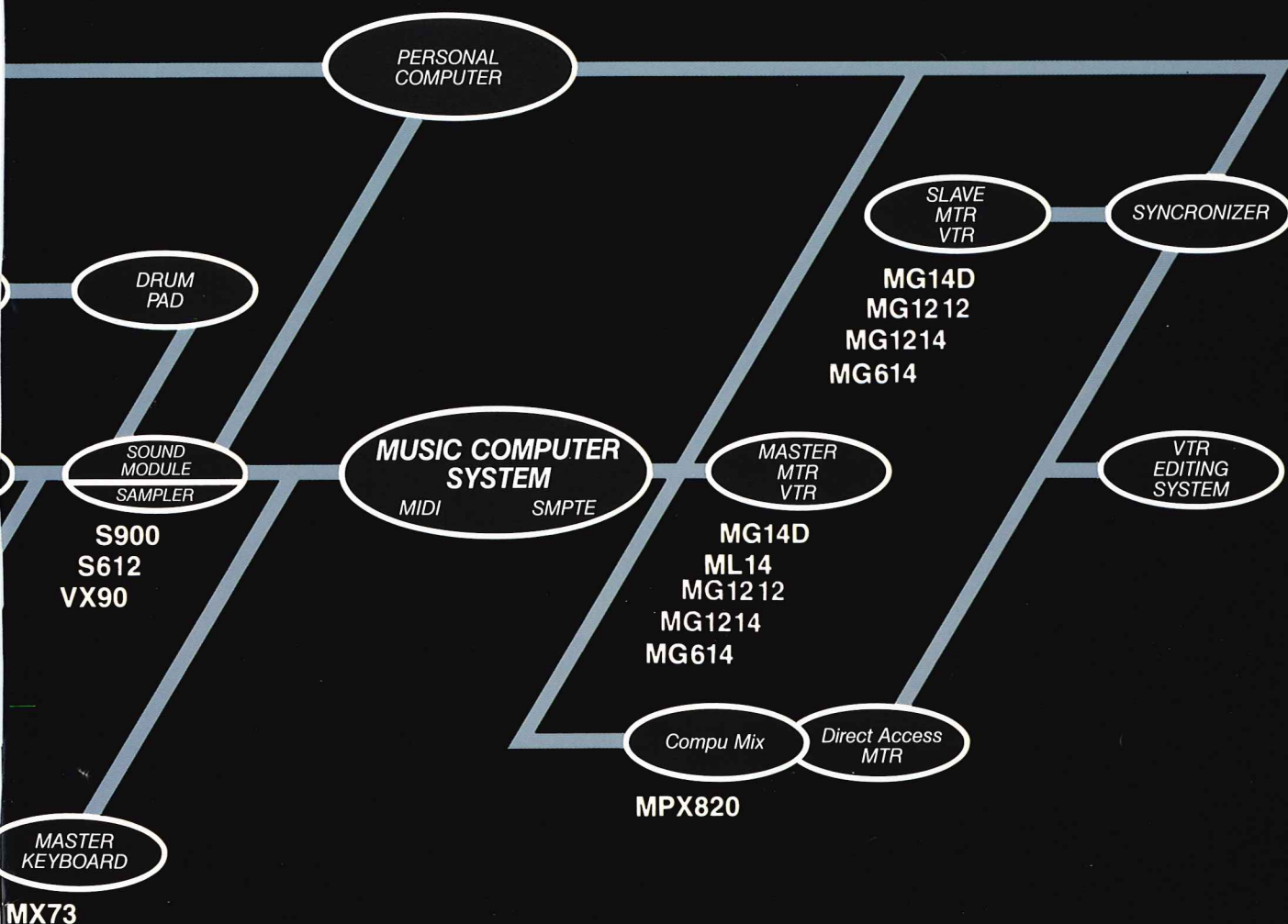


1986 Vol.2



# AKAI ELECTRONIC MUSICAL INSTRUMENT CONTROL SYSTEM





## AKAI—Looking Toward the Future

At AKAI we are always looking ahead toward the next step in the constant evolution of creative musical product design. We know that being a musician in today's complex music world requires that you have access to the latest and most innovative technological developments at all times. And to this end, we at AKAI are proud to present one of the most fantastic line ups of creative musical products ever assembled. A touch of tomorrow's technology for today's musician.



## MG1212 SPECIFICATIONS

### DECK SECTION

- Tape format • 1/2 inch AKAI original cassette tape (MK20)
- Track format • 14 track 12 channel (including 1 control track and 1 sync track)
- Tape head configuration • SGX low noise crystal ferrite recording, playback head (1)
- Control head × 1 (Ferrite)
- Erase head × 1 (Ferrite)
- Tape speed • 19cm/sec, 9.5cm/sec
- Tape speed accuracy •  $\pm 0.2\%$  Deviation (19cm/sec, 9.5cm/sec)
- Pitch control •  $\pm 12\%$  at normal tape speed
- Recording time • 10 minutes (19cm/sec), 20 minutes (9.5cm/sec)
- Wow/Flutter (REC/PB) • 19cm/sec 0.03% W-RMS,  $\pm 0.05\%$  w/peak (EIAJ),  $\pm 0.05\%$  peak (DIN/IEC weighted)
- 9.5cm/sec 0.04% W-RMS,  $\pm 0.06\%$  w/peak (EIAJ),  $\pm 0.06\%$  peak (DIN/IEC weighted)

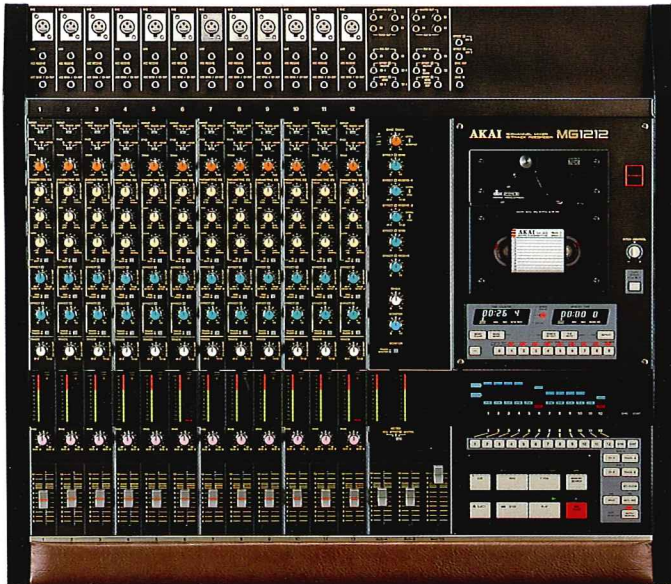
### MIXER SECTION (0dB = 0.775V r.m.s.)

#### Inputs

- MIC • (5K $\Omega$ , Balanced)
  - Normal input level - 60dB/ - 40dB/ - 20dB
  - Maximum input level - 12dB/ + 7dB/ + 18dB
- LINE • (47K $\Omega$ , Phone jack)
  - Normal input level - 21dB
  - Maximum input level + 22dB
- AUX • (22K $\Omega$ , Pin jack) Normal input level - 5.5dB
- ACC RECEIVE • (10K $\Omega$ , Phone jack) Normal input level - 5.5dB
- EFFECT A, B RECEIVE • (22K $\Omega$ , Phone jack) Normal input level - 21dB
- BUS-IN • (22K $\Omega$ , Phone jack) Normal input level - 5.5dB
- EFFECT A, MIX 1+2 • (47K $\Omega$ , Phone jack) Normal input level - 5.5dB
- SYNC IN • (47K $\Omega$ , Phone jack) Normal input level - 21dB
- Total harmonic distortion • 19cm/sec: 0.5% (EIAJ) 0dB
- 9.5cm/sec: 0.8% (EIAJ) 0dB
- Maximum recording level 315Hz, +12dB (EIAJ) 19cm/sec, 9.5cm/sec
- Tape rewind time • Approximately 120 seconds
- Dynamic range • 115dB, 1kHz (19cm/sec, 9.5cm/sec)
- Noise reduction • dbx TYPE-I
- Frequency response • 50 - 20kHz (19cm/sec)
- 50 - 16kHz (9.5cm/sec)
- Signal to noise ratio • 94dB (NAB A WTD), Reference 3% THD at 315Hz (19cm/sec, 9.5cm/sec)
- Cross talk • (between neighboring channels) 55dB, 1kHz (19cm/sec 9.5cm/sec)
- Erasure • Better than 75dB, 125Hz
- Motor • Frequency generator DC servo capstan motor × 1
- DC coreless reel motor × 1
- DC loading motor × 1

#### Outputs

- ACC SEND • (120 $\Omega$ , Phone jack) Normal output level - 5.5dB
- MASTER OUT • (120 $\Omega$ , Phone jack)
  - Normal output level - 5.5dB
  - Maximum output level + 8.5dB
  - Output Capability + 17.5dB
- TRACK OUT • (120 $\Omega$ , Pin jack)
  - Normal output level - 5.5dB
  - Maximum output level + 1.5dB
  - Output Capability + 17.5dB
- MONITOR OUT • (120 $\Omega$ , Pin jack)
  - Normal output level 0dB
  - Maximum output level + 14dB (master monitor), + 7dB (track monitor)
  - Output Capability + 17.5dB
- EFFECT SEND A • (120 $\Omega$ , Phone jack)
  - Normal output level - 5.5dB
  - Maximum output level + 1.5dB (POST), - 5.5dB (PRE)
- EFFECT SEND B • (120 $\Omega$ , Phone jack)
  - Normal output level - 5.5dB
  - Maximum output level + 1.5dB (FADER), - 5.5dB (TRACK)
- BUS OUT • (120 $\Omega$ , Phone jack)
  - Normal output level - 5.5dB
  - Maximum output level + 1.5dB
- SYNC OUT • (120 $\Omega$ , Phone jack) Normal output level - 5.5dB
- HEADPHONE • Maximum 100mV 8 $\Omega$
- Signal to noise ratio • MIC: Better than 55dB, LINE: Better than 60dB
- Trim adjustment range • - 20dB - 0dB
- Parametric EQ control • HIGH: 1.5KHz - 15KHz  $\pm 15$ dB, MID: 350Hz - 5KHz  $\pm 15$ dB
- LOW: 40Hz - 800Hz  $\pm 15$ dB
- Indicators • Over load: Indicator lights up at 3dB under maximum level
- Sync level - 10: Indicator lights up at - 15.5dB
- 0: Indicator lights up at - 5.5dB
- Dimensions • 856 (W) × 205 (H) × 752 (D) mm
- Weight • 42.0kg



**The Incredible Recording System that Revolutionized the Music Industry**  
The MG1212 12 Channel Mixer/14 Track Recorder is a complete, compact recording system that has become the most innovative and exciting creative tool in the recording industry. The AKAI MG1212 is the world's first 1/2 inch cassette 12 Channel Mixer/14 Track Recorder giving musicians all the features of a professional recording studio in a single compact unit that can be operated with the ease and simplicity of a home video recorder.

### A 14 Track Recorder and Sophisticated Auto Locating System

The MG1212 utilizes a special AKAI 1/2 inch tape format to let you record 12 audio tracks (with dbx Type 1 noise reduction) as well as a sync track and an internal control track. The MG1212 features the specially developed Super GX multitrack Glass Crystal Ferrite head for high performance and durability. AKAI's exclusive Lambda loading system assures outstanding tape

to head contact. The smooth transport and shuttle system give you the best possible tape handling and sound performance. In addition, the MG1212 has a full function computer-assisted autolocator that performs multi-point search to cue, repeat playback, auto punch-in/punch-out, playback mute, and much more, all with absolute precision. The real time digital tape counter counts in increments of 1/10 of a second for maximum accuracy. Both the tape count and memory count appear on brilliant blue FL displays for high visibility.

### Flexible 12 Channel Mixing Console and Computerized Patching

The MG1212 has a full function 12 channel mixing console with truly professional signal processing capabilities. Features include a 3-band parametric EQ, a 12 segment LED bar graph meter, two effect sends, insert points, an XLR balanced MIC input, an adjustable level trim and pad, a track monitor, and pan, on every channel. On top of this, the MG1212 has a computer assisted channel/track selector and switching matrix that makes patching fast and easy. Flexible routing capabilities allow you to quickly set up complex patches for track bouncing, editing, or mixdown, with the simple push of a few buttons, thus eliminating the usual confusing tangle of patch cords. The MG1212, with its advanced features and many convenient time-saving functions, opens up an incredible new experience in the art of sound recording.



## MG1214 SPECIFICATIONS

### DECK SECTION

- Tape format • 1/2 inch AKAI original cassette tape (MK20)
- Track format • 14 tracks/12 channel (including 1 control track and 1 sync track)
- Head configuration • Super GX recording/playback head (1)
- Control head (1), Erase head (1)
- Tape speed • 19cm/s and 9.5cm/s
- Tape speed deviation •  $\pm 0.2\%$  (19cm/s, 9.5cm/s)
- Pitch control •  $\pm 12\%$  (of standard speed)
- Recording time • 10 minutes (19cm/s) or 20 minutes (9.5cm/s)
- Wow and flutter • 19cm/s: 0.03% (W-RMS)  $\pm 0.05\%$  Peak (DIN/IEC Weighted)
- 9.5cm/s: 0.04% (W-RMS)  $\pm 0.06\%$  Peak (DIN/IEC Weighted)
- Distortion • 19cm/s: 0.5%, 0dB (315Hz third harmonic distortion)
- 9.5cm/s: 0.8%, 0dB (315Hz third harmonic distortion)
- Max recording level • (315Hz) +12dB 19cm/s, 9.5cm/s
- Tape rewind time • Approx, 120 seconds
- Dynamic range • 115dB, 1kHz (19cm/s, 9.5cm/s)
- Noise reduction • dbx Type 1
- Frequency characteristics • 19cm/s: 50Hz~20kHz, 9.5cm/s: 50Hz~16kHz
- SN ratio • 94dB (NAB A-WTD, 315Hz, 3% third harmonic distortion)
- Cross talk • (Between neighboring channels) 55dB, 1kHz (19cm/s, 9.5cm/s)
- Erase ratio • More than 75dB (125Hz)
- Motor configuration • Capstan: FG servo DC motor (1)
- Real motor: Coreless DC motor (1)
- Loading motor: DC motor (1)
- Synchronizer jack • D-SUB 15 pin (SMPTE)

### MIXER SECTION (0dB = 0.775 V r.m.s.)

- Inputs
  - Mic • (5K $\Omega$ , balanced XLR)
    - Standard input level: -60dB/-40dB/-20dB
    - Maximum input level: -12dB/+7dB/+18.0dB
  - Line • (47K $\Omega$ , phone jack)
    - Standard input level: -21dB
    - Maximum input level: +22dB
  - Aux • (22K $\Omega$ , pin jack) Standard input level: -5.5dB
  - Acc receive • (10K $\Omega$ , phone jack) Standard input level: -5.5dB
  - Effect A, B receive • (22K $\Omega$ , phone jack) Standard input level: -21dB
  - Bus in • (22K $\Omega$ , phone jack) Standard input level: -5.5dB
  - Effect A, mix 1+2 • (47K $\Omega$ , phone jack) Standard input level: -5.5dB
  - Sync in • (47K $\Omega$ , phone jack) Standard input level: -21dB
- Outputs
  - ACC send • (120 $\Omega$ , phone jack) Standard output level: -5.5dB
  - Master out • (120 $\Omega$ , pin jack)
    - Standard output level: -5.5dB
    - Maximum output level: +14.5dB
    - Output capacity: +17.5dB
  - Track out • (120 $\Omega$ , pin jack)
    - Standard output level: -5.5dB
    - Maximum output level: +1.5dB
    - Output capacity: +17.5dB
  - Monitor out • (120 $\Omega$ , pin jack)
    - Standard output level: 0dB
    - Maximum output level: +17.5dB (MASTER MONITOR)
    - +7dB (TRACK MONITOR)
    - Output capacity: +17.5dB
  - Effect send A • (120 $\Omega$ , phone jack)
    - Standard output level: -5.5dB
    - Maximum output level: +1.5dB (POST)/-5.5dB (PRE)
  - Effect send B • (120 $\Omega$ , phone jack)
    - Standard output level: -5.5dB
    - Maximum output level: +1.5dB (FADER)/-5.5dB (TRACK)
  - Bus out • (120 $\Omega$ , phone jack)
    - Standard output level: -5.5dB
    - Maximum output level: +14.5dB
  - Sync out • (120 $\Omega$ , phone jack) Standard output level: -5.5dB
  - Headphone • Maximum: 200mV/8 $\Omega$
- S/N ratio and Noise level • MIC: -126dB equivalent input noise
- (Single input) LINE: 60dB
- Trimmer adjustment range • -20dB - 0dB
- Parametric equalizer • HIGH: 1.5kHz ~ 15kHz  $\pm 15$ dB
- MID: 350Hz ~ 5kHz  $\pm 15$ dB
- LOW: 40Hz ~ 800Hz  $\pm 15$ dB
- Indicators • Over load: lights up at -3dB from the maximum level of the input amplifier
- SYNC LEVEL: -10: lights up at a level of -15.5dB
- 0: lights up at a level of -5.5dB

Dimensions • 856(W) x 205(H) x 752(D)mm  
Weight • 42.0kg



### The Revolution Moves On with the Advanced New MG1214

The engineers at AKAI have combined all of the latest advancements in both audio and video technology to develop the incredibly advanced new MG1214 12 Channel Mixer/14 Track Recorder. The MG1214 opens up a world of exciting possibilities with its SMPTE sync capabilities. A synchronizer jack allows for quick and easy connection of the MG1214 to almost every popular SMPTE synchronizer for synchronous recording with other audio or video machines. The MG1214 also contains a number of important electronic design changes including improved signal to noise performance, an improved MIC input circuit, and a more powerful monitoring circuit. The MG1214 truly answers the musician's dream for a powerful, yet simple to use personal recording system.

### A State-of-the Art Multitrack Recorder and Programmable Auto Locator

The MG1214 utilizes the special AKAI 1/2 inch tape format as well as the Super GX Glass Crystal Ferrite Head to let you record 12 audio tracks as well as a sync track and an internal control track. AKAI's exclusive Lambda Loading Mechanism gives optimum tape to head contact, and an ultra-low mass loading roller assures the lowest possible modulation noise. The highly stable transport design as well as the use of dbx Type 1 raise the performance specifications of the MG1214 well beyond that of conventional professional audio machines. The MG1214 also contains a computerized multi-function auto locator with super features. The nine location memories let you perform multi-point search to cue, repeat playback, auto punch-in/punch-out, playback mute, and much more. These advanced features greatly help to facilitate the recording process.

### Powerful Computerized Patching

The MG1214 has a built-in, computerized channel/track selector that lets you route any channel signal to any desired track with the simple push of a button. It's that easy. The need for cumbersome and time-consuming patching has been eliminated allowing you more time to spend on creative editing and mixing. The 12 Channel Mixer is packed full of all the features you would expect to find in a professional quality mixer including balanced XLR MIC inputs, adjustable level trims and pads, smooth 3-band parametric sweep type EQs, two independent effect sends (each with a stereo return) on each channel, insert points, in-line track monitors, multi-colored 12 segment LED bar graph meters, and new smooth linear response faders. The MG1214, with its simple push button operation, flexible effects routing, and professional audio quality, puts the spontaneity and magic back into the art of making music.



## 6 CHANNEL MIXER/ 4 TRACK RECORDER MG614

### MG 614 SPECIFICATIONS

#### DECK SECTION

- Track system ● 4 track (one way)
- Play back channel ● 4 channel + sync
- Recording channel ● 4 channel + sync
- Heads ● 4 track REC/PB × 1
- 4 track ERASE × 1
- Motor ● Capstan (FV SERVO DD motor)
- Reel drive (DC motor)
- Cam drive (DC motor)
- Tape ● C-cassette CrO<sub>2</sub> tape
- Track output ● Output load impedance: More than 10K $\Omega$
- Maximum output level: +12dBV
- Frequency response ● 9.5 cm/s: 30Hz ~ 20KHz, 4.75 cm/s: 40Hz ~ 13KHz
- Noise reduction ● dbx TYPE I (switchable)
- Distortion ● 1.0% (1KHz 0VU)
- S/N ratio ● 60dB (EIAJ), 90dB (EIAJ dbx on)
- Cross talk ● 70dB (1KHz, dbx on)
- Erase ratio ● 70dB (1KHz)
- Tape speed ● 9.5 cm/s, 4.75 cm/s
- Pitch control ●  $\pm 10\%$
- Wow/Flutter ● 0.04% (peak WTD)
- Recording time ● 15 minutes (C-60 tape, 9.5 cm/s)
- Fast winding time ● Approximately 90 seconds (C-60)

#### MIXER SECTION (0dB = 1V)

- Inputs
  - Mic ● (1K $\Omega$ , balanced XLR)
  - Normal input level -67dBV
  - Maximum input level -16dBV
  - Mic / Line ● (100K $\Omega$ , Phone jack)
  - Normal input level -60dBV ~ 10dBV
  - Maximum input level +15dBV
  - Aux ● (22K $\Omega$ , Phone jack)
  - Normal input level -10dBV
  - Acc receive ● (68K $\Omega$ , Phone jack)
  - Normal input level -10dBV
  - Effect receive ● (220K $\Omega$ , Phone jack)
  - Normal input level -20dBV
- Outputs
  - Monitor out ● (100 $\Omega$ , pin jack)
  - Normal output level -10dBV
  - Track out ● (100 $\Omega$ , pin jack)
  - Normal output level -10dBV
  - Acc send ● (100 $\Omega$ , pin jack)
  - Normal output level -10dBV
  - Effect send 1-2 ● (100 $\Omega$ , Phone jack)
  - Normal output level -10dBV
  - S/N ratio ● MIC: Input to line output 68dB (IHF)
  - LINE: Input to line output 72dB (IHF)
  - Indications ● OVER LOAD: 20dB above normal input level
  - Parametric EQ ● HIGH: 800Hz ~ 10kHz  $\pm 15$ dB
  - LOW: 40Hz ~ 1.5kHz  $\pm 15$ dB
  - Frequency response ● LINE: 20Hz ~ 20kHz  $\pm 1$ dB
  - MIC: 20Hz ~ 18kHz  $\pm 1$ dB
  - Distortion ● 0.05% (1kHz, normal level) / Cross talk ● 65dB (1kHz)
  - Dimensions ● 470 (W) × 157 (H) × 556 (D) mm / Weight ● 14.5kg



**The New Computer-Assisted Personal Multitrack Recording System**  
The MG614 is a compact, computer-assisted 6 Channel/4 Track recording system that sets a new standard in personal creative recording technology. It uses standard CrO<sub>2</sub> cassettes and has many of the sophisticated and time-saving convenience features of its big brother the MG1214, including a built-in computerized channel/track selector, and a multi-function auto location system. In addition, an incredibly flexible push-button patching system and track buss allow the MG614 to handle up to a ten channel mix (4 track playback and 6 additional channel inputs) with independent control of every channel.

**A Professional Quality Multitrack Recorder and Computerized Auto Locator**  
The MG614 will record up to 4 audio tracks, one of which can be switched to simultaneously record a special sync track. The extra sync track lets you synchronize MIDI instruments and sequencers to a sync signal without tying up precious audio tracks. You can select either the standard 4.75 cm/sec tape speed, or the faster 9.5 cm/sec speed for extended high frequency response. The use of dbx Type 1 gives you increased headroom and wider dynamic range for exceptional sound clarity and definition. Audible hiss is virtually eliminated and distortion is incredibly low. In addition, the MG614 has a built-in, multi-function auto locator that allows you to perform multi-point search to cue, search and record, search and play, repeat playback, and much more. There are also special func-

tions for auto monitor during playback, and to rehearse punch-in recording. These convenience functions along with the computerized auto location system will assist you to make the recording process faster, simpler, and more enjoyable.

#### A Powerful 6 Channel Mixing Console and Sophisticated Patching System

The creative possibilities with the MG614's flexible mixing capabilities and versatile signal routing system are absolutely astonishing. Each channel offers input selectors, adjustable trim pads, a 2-band parametric sweep type EQ that allows you to tailor any frequency from 40Hz to 10kHz  $\pm 15$ dB, two independent effect sends (each with a stereo return), pans, buss matrix, and a smooth noise-free fader. There are also two XLR balanced MIC inputs for professional compatibility. Now the creativity starts to flow. The computerized program-mable channel/track selector lets any channel be connected to any track input with the simple push of a button. From here, a newly developed switch matrix patch system lets you route signals in almost every conceivable way for monitoring, track bouncing, or mixdown. This marvelously simple push-button patch system entirely eliminates the need for a jungle of patch cords allowing you more time to work on creative recording and mixing. The MG614 is the world's first compact cassette multi-track recording system to offer features that are so advanced and operation that is so simple.





### A Compact SMPTE Compatible 14 Channel Multitrack Recorder

The MG14D Rack Mountable 14 Track Recorder is a high-performance durable rackmount unit ready to stand up to the rigorous demands of multitrack recording. The MG14D represents a new direction in recording versatility with its compact rack-mountable design and SMPTE compatibility. It utilizes the same high quality Super GX multitrack recording head as used in the MG1214 as well as an improved loading mechanism to give you the same professional performance and operational features found on the MG1214. Bar graph meters display the precise signal level on each recording track.

### A Versatile Production Tool

The MG14D has 12 audio tracks as well as a sync track and an internal control track. With the use of SMPTE time code it is possible to synchronize your audio and video machines together as well as your MIDI based instruments and sequencers. With SMPTE compatibility the MG14D can be used as a production tool for video, film, and sound effects assembly as well as a tool for creative music production in the recording studio. Combined with the matching ML14 Programmable Auto Locator the capabilities expand into those of a full-fledged professional SMPTE based recording system capable of handling the most demanding work.

### An Intelligent Auto Locator for Remote Control of the MG14D

The ML14 represents the state-of-the art in auto locating technology. All transport controls along with record and playback status can be controlled and viewed from the ML14. In addition to providing you with total remote control of the MG14D, it will add an exciting dimension to the operating capabilities. Simple push-button operation of the ML14 Auto Locator's controls yields such sophisticated computer-assisted functions as memory search, punch-in/punch-out, playback mute, repeat, and more. A ten key program pad lets you manually enter values into one of the memories for later recall. The memories in the ML14 will be retained for as long as one week. The memory time and the time count are displayed on a highly visible 5 digit FL display.

### MG14D SPECIFICATIONS

- Tape format • 1/2 inch AKAI Original cassette tape (MK20)
- Track format • 14 tracks/12 channels (including 1 control track and 1 sync track)
- Head configuration • Super GX recording/Playback head (1), Control head (1), Erase head (1)
- Record level calibration • 0dB referenced to 200 nWb/m of tape flux
- Tape speed • 19cm/s and 9.5cm/s
- Tape speed deviation •  $\pm 0.2\%$  (19cm/s, 9.5cm/s)
- Pitch control •  $\pm 12\%$  (of standard speed)
- Recording time • 10 minutes (19cm/s) or 20 minutes (9.5cm/s)
- Wow and flutter • 19cm/s: 0.03% (W.RMS),  $\pm 0.05\%$  Peak (DIN/IEC Weighted)  
9.5cm/s: 0.04% (W.RMS),  $\pm 0.06\%$  Peak (DIN/IEC Weighted)
- Distortion • (315Hz, third harmonic distortion, dbx ON)  
19cm/s: 0.5% 0dB, 9.5cm/s: 0.8% 0dB  
Sync track: 1.5% (dbx OFF)
- Max. recording level • (315Hz, 3% third harmonic distortion, dbx ON) +12dB (19cm/s, 9.5cm/s)
- Tape rewind time • Approx 120 seconds
- Dynamic range • (dbx ON) 115dB, 1kHz (19cm/s, 9.5cm/s)
- Noise reduction • dbx Type 1
- Frequency characteristics (dbx ON) • 19cm/s: 50 ~ 20kHz, 9.5cm/s: 50Hz ~ 16kHz
- Sync track (dbx OFF) • 19cm/s: 50Hz ~ 10kHz, 9.5cm/s: 50Hz ~ 8kHz
- SN ratio • 94dB (NAB A-WTD, 315Hz 3% third harmonic distortion, dbx ON)  
Sync track: 58dB (dbx OFF)
- Cross talk • (dbx ON, between neighboring channels) 55dB, 1kHz (19cm/s, 9.5cm/s)  
Sync track to Audio track 1, 70dB, 1kHz (19cm/s, 9.5cm/s)
- Erase ratio (dbx ON) • 75dB (125Hz), SYNC track 52dB (dbx OFF)
- Motor configuration • Capstan: FG servo DC motor (1), Reel motor: Coreless DC motor (1)  
Loading motor: DC motor (1)
- Synchronizer jack • D-sub 25 pin (for SMPTE)
- Locator jack • D-sub 15 pin (for ML14)
- Remote jack • 8 PIN/DIN (for RC-X3, RC-X9)
- INPUT
- Unbalanced input • (RCA connector  $\times$  12) Input impedance 50K ohms  
Standard input level -10dBV  
Maximum input level +15dBV
- Balanced input • (XLR connector  $\times$  12) Input impedance 10K ohms  
Standard input level +4dBs  
Maximum input level +23dBs
- Sync input • (1/4" JACK  $\times$  1) Input impedance 50K ohms  
Standard input level -10dBV  
Maximum input level +15dBV
- OUTPUT
- Unbalanced output • (RCA connector  $\times$  12) Output impedance 100 ohms  
Optimum load impedance more than 10K ohms  
Standard output level -10dBV  
Maximum output level +15dBV
- Balanced output • (XLR connector  $\times$  12) Output impedance 100 ohms  
Optimum load impedance more than 10K ohms  
Standard output level +4dBs  
Maximum output level +23dBs
- Sync output • (1/4" jack  $\times$  1) Output impedance 100 ohms  
Optimum load impedance more than 10K ohms  
Standard output level -10dBV  
Maximum output level +15dBV
- Dimensions • 482.6(W)  $\times$  225(H)  $\times$  430(D)mm  
(EIA Rack mount/5U)
- Weight • 26.0kg

### ML14 SPECIFICATIONS

- Operation keys • Tape mechanism control: Play, F-Fwd, Rwd, Stop, Rec pause,  
Cue, Memory search, Anti-Rec
- Sync and control: Control Rec/P.B  
Sync Rec/P.B
- Tape Monitor: Auto/Manual
- Rec selector (TRACK 1-12): Rec/P.B
- Locator control: Manual input 10 Keys (0-9), Key, Delete  
Auto memory (1-9)  
Memory all clear (0)  
Minus search, Memory search, Clear,  
Store, Punch in-out, P.B mute, Repeat,  
Region, Reset, Capture, Absolute
- Reset switch
- Display • Time counter 5 digit FLD  
Memory time 5 digit FLD
- Memory back-up • One week
- External jack • D-sub 15 pin (for MG14D)
- Dimensions • 482.6(W)  $\times$  56(H)  $\times$  132(D)mm  
(EIA Rack mount/3U)
- Weight • 2.0kg

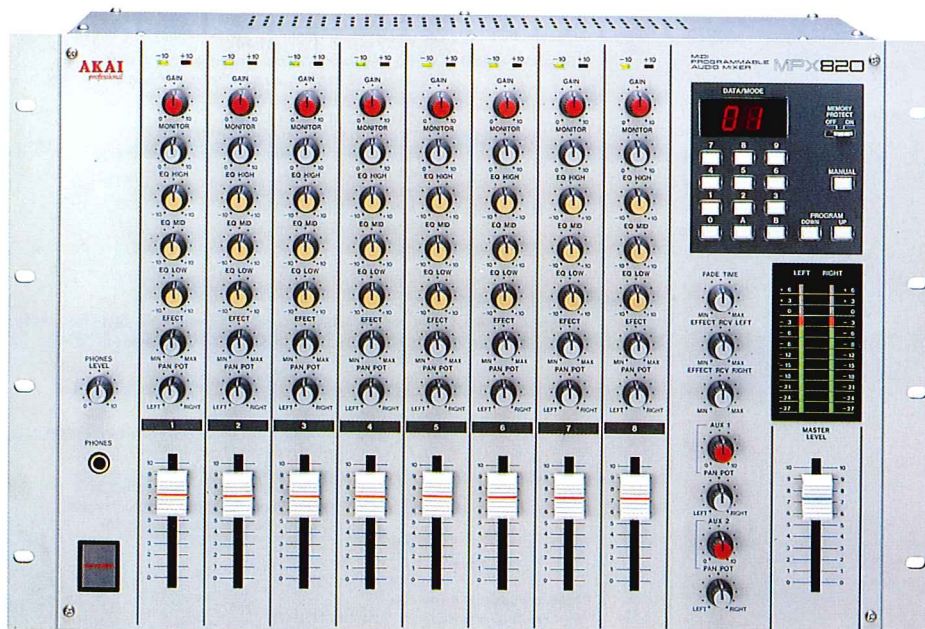






#### MPX820 SPECIFICATIONS

Frequency response (Mic/Inst/Line) • 20Hz ~ 20kHz, +0.5 ~ -0.7dB  
 T.H.D. • 0.04% at 20Hz ~ 20kHz, +20dBm out  
 E.I.N. • -128dBm maximum  
 Output noise • 1 millivolt all faders down, master fader full up, all pans centered  
 Max. Gain • Mic -70dBm  
 Inst -35dBm  
 Line -20dBm  
 Crosstalk • 70dB at 1kHz  
 Channel E.Q. • Hi 10kHz shelving  $\pm 15$ dB  
 Mid 1.5kHz peaking Q-0.5  $\pm 15$ dB  
 Low 100Hz shelving  $\pm 15$ dB  
 Inputs • Channel 1-8: XLR Mic -55dBm to -20dBm 2.5K $\Omega$   
 1/4" Inst -35dBm to -6dBm 100K $\Omega$   
 1/4" Line -10dBm to +10dBm 10K $\Omega$   
 AUX 1-2: 1/4" Mic -50dBm to -15dBm 2.7K $\Omega$   
 1/4" Inst -30dBm to -1dBm 47K $\Omega$   
 1/4" Line -5dBm to +15dBm 10K $\Omega$   
 Effects return: 1/4" +15dBm (Max input) 50K $\Omega$   
 Outputs • Main Left and Right 1/4" +20dBm 150 $\Omega$   
 Monitor (post E.Q. and fader) 1/4" +20dBm 150 $\Omega$   
 Effects (post fader) 1/4" +20dBm 150 $\Omega$   
 Channel patches • Send/Return 1/4" Stereo Line Level 400 $\Omega$  send/50K $\Omega$  return  
 Programmable Features • All Levels, Sends, Pans, AUX's: 0.03dB resolution  
 E.Q.S. (Hi, Mid, Low): 0.12dB resolution  
 Fade Time: 40 milliseconds to 30 seconds  
 Memory: 99 sets of front panel settings  
 Battery backup 10 years  
 Time for tape backup 2.2 minutes  
 MIDI function • Program change  
 Displays • Left and Right mains: 12 segment LED ladder -27dB to +6dB (3dB incr.)  
 Channels 1-8: 2 segment LED ladder -10dB to +10dB  
 Faders • 60mm  
 Dimensions • 482.6(W) x 310(H) x 203(D)mm (EIA Rack mount/7U)  
 Weight • 10.5kg



#### An Advanced Computer-Assisted MIDI Compatible Mixing Console

The challenge of a new recording technology has been met. The MPX820 is an impressive eight channel console that stores all front panel functions including levels, sends, returns, aux inputs, pans, and 3 band EQ into its 99 internal memory locations for instant recall. Program changes can be selected from the front panel, by MIDI signal, foot-switch, or from sync tones on tape. The fade time between two different settings is programmable from 40 milliseconds to 30 seconds allowing you to automate fades, pans, and EQ settings.

#### Impeccable Audio Performance

The sonic performance of the MPX820 is unmatched by any similar console, programmable or not. Thanks to AKAI's minimum signal path design the audio signal actually passes through fewer op-amp stages than in a traditional mixer.

#### Operational Ease of Use

Operation of the MPX820 is fast and easy. After all, that should be the goal for every computer-assisted console. Simply set up the front panel settings however you desire, and record the settings in one of the 99 memory locations for later recall. The MPX820 can even be interfaced to a computer for developing programs that let you edit and display the MPX820 panel settings on a computer screen.

#### Maximum Performance Flexibility

The MPX820 is the ideal choice as a mixer for a MIDI based keyboard system or as a programmable mixing console in the recording studio. Several MPX820s can be slaved together through MIDI to offer additional channels of automated mixdown so no task is too large to handle. With the MPX820 you can now perform live mixes on stage which were previously possible only in the studio. And in the studio, you can free your hands up to do more than ever before. However you choose to use the MPX820, it will offer you an exciting new sense of performance flexibility in your music creation.





#### GX912 SPECIFICATIONS

- Track system • Compact cassette stereo
- Motors • FG servo direct drive motor for capstan drive × 1  
DC motor for reel drive × 1  
DC motor for mechanism drive × 1
- Heads • Super GX head for recording × 1  
Super GX head for playback × 1  
Erase head × 1
- Wow and flutter • 0.025% (WRMS), 0.04% (DIN)
- Distortion • 0.5% (Metal)
- Frequency response • Metal: 20Hz to 21,000Hz ± 3dB  
Chrome: 20Hz to 20,000Hz ± 3dB  
Normal: 20kHz to 19,000Hz ± 3dB
- S/N • Metal: 60dB (measured via tape with peak recording level)  
Dolby C type NR ON: Improves up to 15dB at 500Hz, 20dB at 1kHz to 10kHz  
Dolby B type NR ON: Improves up to 5dB at 1kHz, 10dB above 5kHz
- Input • Line in: 70mV/47k ohms
- Output • Line out: -10dBV/1k ohm  
Phones: 1.3mV (8 ohms)/83.2 ohms
- Power Requirements • 120V, 60Hz for USA and Canada  
220V, 50Hz for Europe except UK  
240V, 50Hz for UK and Australia
- Dimensions • 482.6(W) × 105(H) × 372(D)mm (EIA Rack mount 2U)
- Weight • 7.0kg

#### MS200 SPECIFICATIONS

- Speaker system • 2 way: woofer (13cm cone type)  
tweeter (2.5cm soft dome)
- Impedance • 4 ohms
- Input rated • 80 watts
- Maximum • 200 watts
- Sensitivity • 89dB (1m/1 watt)
- Frequency response • 60Hz ~ 23kHz
- Character switch • Point Source, Normal, Enhance
- Dimensions • 170(W) × 270(H) × 182(D)mm
- Weight • 4.2kg



#### A High Performance Stereo Cassette Deck for Studio Use

The new GX912 Master Mixdown Cassette Deck incorporates the latest design advancements to meet the challenge of the most demanding studio applications. The use of the Super GX 3-Head System offers extended frequency response and dynamic range while also enabling monitoring through the playback head during recording. A Closed Loop Double Capstan System ensures optimum tape-to-head contact and smooth tape transport at all times. At the heart of the GX912 is a microcomputer which controls the entire transport mechanism for precise and flawless performance everytime.

#### Superb Operating Control

Operational ease is another feature that makes the GX912 welcome in the studio. Intro Scan, Quick Memory Search, Instant Program Location System, and other functions are all easily accessible at the feather-touch of the front panel push-buttons or from the wireless remote control. The FL display gives you a bright, highly visible readout of the current status of all important operational settings. The digital electronic tape counter shows the elapsed time, as well as the index position, and the time remaining. The GX912 fits into a 2U standard 19 inch rackmount for fast and simple installation.

#### A High Performance Studio Reference Monitor

The AKAI MS200 Monitor Speaker has been designed for superb and accurate music reproduction in any studio, listening room, or monitoring environment. The MS200 is the only monitor which lets you select from three different characteristic response modes. The point source mode gives you a crisp, full-range tight sound with all frequencies in-phase and time coherent. The 2-Way mode offers a flat response with clarity and definition far superior to any other compact monitor. The special enhance mode offers an improved response of both the high and low frequency sounds making it ideal for monitoring music with an unusually wide frequency bandwidth.



# The Most Powerful and Extensive Digital Samplers Ever Designed

## The Dawning of a New Era in Digital Sampling

For those who wish to venture into the aura of the twilight, AKAI's Digital Samplers will take you to the extreme limits of sonic realism and as far beyond as you dare to explore. Whether you're looking for a Sampler with the best cost performance, or simply the Very Best Sampler, AKAI has them both.

### S900 SPECIFICATIONS

System • Digital sampling  
Sampling frequency: 7.5 kHz ~ 40 kHz (MIN ~ MAX)  
Sampling time: 11.75 sec. ~ 63.3 sec. (MIN ~ MAX)  
Voice: 8 Voice  
Range: 6 Octave  
Storage • Built-in Floppy disk drive  
Memory capacity: 1M byte  
Memory Medium: 3.5 inch (2DD)  
Both side, Double track, Double density  
Internal memory: 750K byte

Multi sampling • 32  
Edit • Scanning (One shot, Looping, Alternating)  
A.D.S.R. (Velocity-Attack, Velocity-Release)  
Velocity cross fade  
Velocity switch  
Positional cross fade  
Attack pitch offset (-Velocity)  
LFO (delay, rate, depth)  
Filter (Key tracking, Velocity)  
Sample merge

Communication • RS232C or equivalent

External jack • MIDI (IN, OUT, THRU)

REC trigger x 1  
Mic input/REC/P.B. trigger x 1  
Line input/REC/P.B. trigger x 1  
Line output x 8  
Stereo output x 2 (L, R)  
Mix output x 1  
Voice output x 1 (13 PIN/DIN)

Dimensions • 482.6(W) x 132.6(H) x 410(D) mm  
(EIA Rack mount/3U)

Weight • 10.8kg



## Clarity and Brilliance that are Undistinguishable From the Original

The S900 8 Voice MIDI Multiple Point Sampler gives you creative power and expressive control that surpass any other digital sampling device ever designed. With features such as 32 sampling points, frequency response up to 20 kHz, a maximum of 63 seconds of sampling time, and a fast disk drive, it is bound to become the new standard against which all other samplers will be compared.

### Sampling Simplicity

Capture the magic of any sound fast and easy on the S900 Multiple Point Sampler with unsurpassed digital clarity. The 32 multi-sample points let you reproduce any sound across a wide 6 octave range with its original timbre and resonances for stunning realism in sound quality and expression. Then add continuous looping of the sampled sound or alternate looping which plays the digitally sampled sound back and forth to animate it and give it a sense of breath.

### The Ultimate in Creative Editing

AKAI has pioneered the development of a special new sound contouring technique to let you perform velocity cross fades, positional cross fades, velocity switching, and much more to create the most absolutely astounding realism. With these same editing effects you can go to the other sonic extreme as well to create the most bizarre and unusual sounds you've ever heard in your life. And if this isn't enough, the AKAI S900 8 Voice MIDI Multiple Point Sampler lets you do even more: mix and merge sampled sounds to create unusual and unique hybrid sounds, layer sounds for complex overdubs or stereo playback, add LFO modulation, filtering, and envelope shaping. The easy to use rotary edit wheel makes editing both pleasurable and fun. For further editing manipulation, the sampled sound can also be processed through an AKAI polyphonic synthesizer.

### MIDI Mono Mode Multitracking and Sampling Percussion

The S900 allows you to control different sounds on separate MIDI channels so that when combined with a MIDI sequencer,

exciting MIDI mono mode multitracking and overdubbing are possible. You can control up to eight different voices simultaneously and have immediate access of up to 32 completely different sampled sounds, greatly expanding the capabilities of any recording or live performance setup. With an additional option, the S900 can also be used as the ultimate 12 bit Sampling Percussion Instrument with its full sampling time and powerful editing capabilities.

### The Art of Sonic Perfection

The 20 kHz frequency response, incredibly long sampling time, wide dynamic range, and low noise and distortion all assure you of the finest crystal clear sounds. To maximize the performance capabilities of the S900 Multiple Point Sampler, AKAI has produced a comprehensive library of professional studio recorded disks for the S900. A fast 3.5 inch built in disk drive lets you store or load sounds quickly and easily. Put the sounds of sonic perfection into your music with the AKAI S900 8 Voice MIDI Multiple Point Sampler—The new standard in high quality digital sampling.





## S612 SPECIFICATIONS

- Sampling method • 12-bit sampling
- Sampling frequency • 4 kHz ~ 32 kHz (MIN ~ MAX)
- Sampling time • 8,000 ~ 1,000 msec (MAX ~ MIN)
- Frequency characteristics • Recording: 25 Hz ~ 12.5 kHz  
(-3 dB bandwidth)
- Playback: 25 Hz ~ 20 kHz  
(-3 dB bandwidth)
- Voice • 6 voices
- Range • 5 octave
- Function control • Power: ON/OFF
- REC LEVEL: MIN ~ MAX
- MONITOR LEVEL: MIN ~ MAX
- REC MODE: NEW/OVERDUB
- EDIT: SCANNING/memory start (0 ~ 100)  
memory end (0 ~ 100)
- SCANNING MODE/ONE SHOT,  
LOOPING, ALTERNATING
- MANUAL SPLICE (0 ~ 100)
- KEY TRANS/SEMITONE STEP
- TUNE/±100 cent
- LFO/SPEED (MIN ~ MAX)
- DEPTH (MIN ~ MAX)
- DELAY (0 ~ 10)
- OUTPUT/FILTER (LOW ~ HIGH)
- DECAY (0 ~ 10)
- LEVEL (0 ~ 10)
- MIDI: MONO/POLY, CHANNEL UP/DOWN
- DATA: SAVE/VERIFY/LOAD
- DISPLAY: REC LEVEL/MIDI CH (0 = OMNI ON,  
1 ~ 9 = OMNI OFF) I/O (SAVE/LOAD)
- INPUT (0 dB = 0.775 V r.m.s.)
- Input sensitivity/impedance • MIC: -63 dB/5.6 K $\Omega$  (standard phone jack)  
LINE: -27 dB/47 K $\Omega$  (standard phone jack)
- Output • LINE: 2.8 V-P-P/MONO (standard phone jack) × 2  
1 ~ 6 voice separate output
- VOICE: 1.4 V P-P (exclusive jack)  
1 ~ 6 voice separate output
- MIDI • IN/OUT/THRU (5P. DIN)
- Interface • Exclusive sampler disk drive (MD280) connector  
Exclusive DC8V power supply jack
- Power consumption • 40W
- Dimensions • 482.6 (W) × 90.1 (H) × 379 (D) mm (Including largest projection)
- Weight • 6.0 kg



### The Magic of 12 Bit Sampling

The S612 is the first truly professional and affordable 12 bit 6 voice polyphonic digital sampler. By utilizing a 12 bit sampling format, and a sampling frequency of up to 32 kHz, the S612 represents a significant advance in sound quality over older 8 bit machines. The S612 lets you capture and store virtually any sound you can imagine. By simply connecting up the S612 to any MIDI keyboard, sequencer, or computer, you can polyphonically reproduce the most incredibly realistic sounds you've ever heard.

### Simple and Easy Editing

In addition to its superior sound quality, the S612 gives you numerous ways to edit and tailor a sound once it has been stored in the internal memory. You can set the starting and ending point of any sound, or you can layer one sample on top of another for rich and unusual effects. A looping

function lets you continuously repeat a segment of the sampled sound. The alternating function will continuously play a loop forward, and then in reverse, to create infinite sustains with rich and realistic animation. The S612 also has a one-shot playback capability, which when combined with the optional audio trigger kit, allows you to trigger digitally sampled sounds from any audio signal such as from a drum track on tape. In addition, the S612 lets you further manipulate the sound by adding LFO and envelope modulation for realistic enhancement or drastic alteration of the sound. Further editing of the sound is possible by simply connecting it up to an AKAI synthesizer to add additional envelope shaping, filtering, modulation, and more.

### Disk Drive Sound Storage

The MD280 is a compatible disk drive for the S612 that uses 2.8 inch disks allowing

you to store a sampled sound on each side of a disk. Since disks can be stored and loaded is just a matter of seconds, you can have virtually instant access to an entire library of sounds starting with the hundreds of digitally sampled sounds currently available. And this is only the beginning. Since you can sample any sound you desire, there is no limit to the creative possibilities with the S612 and the MD280.

### The Sensation of Sonic Realism and Total Expressive Control

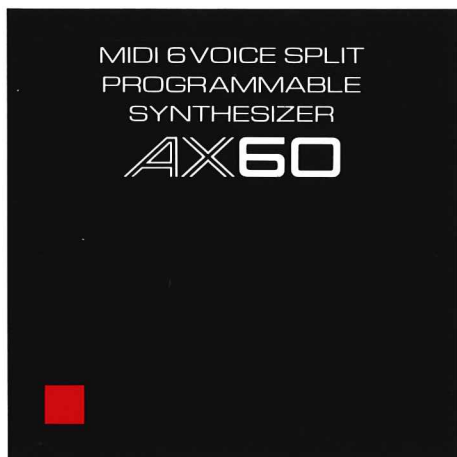
Now you have the capability of reproducing virtually any sound imaginable with sparkling clarity, definition, and vivid dynamic expression. The S612 will respond to MIDI pitch bend, modulation, and velocity dynamics to give you the utmost in expressive control. Expand your musical horizons and experience the sensation and magic of digital sampling with the S612 from AKAI.



MD280 SAMPLER DISK DRIVE

MD280 SPECIFICATIONS • Storage capacity / 1 tone per side (128KB, total for A & B sides) • Number of track / 1 track (spiral)  
• Storage medium / 2.8-inch disk • Longevity of medium / 2000 passes • Power requirements / DC 8V 400mA (supplied from S612 sampler) • Operating temperature range / 20% ~ 80% (no condensation) • Dimensions / 482.6 (W) × 90.1 (H) × 206 (D) mm (rack mounted EIA/2U type) • Weight / 3.7 kg • Standard accessories / Operator's manual, replacement felt, head cleaner applicator





**A Versatile Polyphonic Synthesizer with Split Keyboard Capabilities**

The AX60 MIDI 6 Voice Split Programmable Synthesizer is the superb choice as a flexible all-purpose keyboard. Whether on the stage, in the studio, or at home, the AX60 has features that you will truly appreciate. Any of the 64 internal sounds can be quickly and easily edited using the AX60 front panel sliders. Or you can load up your own personal library of sounds that you have stored on cassettes.

Four different split modes make it easy to play two parts or to control MIDI sound modules and digital samplers. A five mode arpeggio, key transpose switch, and unison switch are all at your creative command. In addition, the AX60 has a SAMPLER input so you can process your digitally sampled sounds as you would any analog synthesizer patch. You can add filtering, modulation, stereo chorusing, envelope shaping, and much more. If you need a synthesizer with versatile features, be sure to check out the AX60. We're sure you'll be impressed.

#### AX60 SPECIFICATIONS

- Key • 61 key 5 octave c-c scale (split keyboard)
- Voice • 6 voice
- Tone generator • VCO (voltage controlled oscillator)
- Internal memory • 64 sound program (8 banks of 8 programs)
- 8 split preset
- External memory • Cassette interface
- Parameters • LFO Section: LFO select (VCO, VCF, VCA)
  - WAVE form (△, ▽, /, \, □, RND)
  - Depth control
  - Speed control
  - Delay control
- VCO Section: Octave (2', 4', 8', 16', 32')
- WAVE form (△, ▽, /, \, □, +1)
- Pulse width control
- Speed control
- EG depth control
- Sampler ON/OFF
- Noise ON/OFF
- A-B balance control
- VCF Section: Cutoff frequency control
- Resonance control
- Key follow control
- VCO modulation control
- HPF control
- EG polarity + / -
- EG Section: Attack control
- Decay control
- Sustain control
- Release control
- Depth level control
- EG destinations (VCF EG, VCA EG, VCA GATE)
- Functions • Master level control
- Master tune control (±50 cent)
- Auto tune ON/OFF
- Split ON/OFF
- Split mode (0-6, 2-4, 4-2, 6-0)
- Split balance control
- Chorus (1, 2, OFF)
- Arpeggio ON/OFF
- Arpeggio (5 mode)
- Arpeggio hold ON/OFF
- Arpeggio speed control
- Unison (upper, lower, off)
- Wheel (upper, lower)
- Key transpose ON/OFF
- Edit recall ON/OFF
- Compare ON/OFF
- Write
- Set
- MIDI (1 ~ 16ch)
- Memory protect ON/OFF
- Wheel • Pitch bend/Cut off frequency wheel, Pitch bend range control
- Modulation wheel, Modulation depth control
- External jack • MIDI (IN, OUT, THRU)
- Tape (load/in, save/out)
- Sampler input (13 pin/DIN)
- Sustain pedal jack
- Arpeggio EXT sync jack
- Audio output (U/L MIX/Left, Right)
- Headphone jack
- Dimensions • 1,000(W) × 110(H) × 346(D)mm
- Weight • 11.0kg





## ACCESSORIES

PS-X80	FOOT SWITCH
DD-X25	MIDI CABLE (2.5m)
DD-X50	MIDI CABLE (5.0m)
DD-X5013	13 PIN DIN CABLE (5.0m)
SD-X14	STAND FOR ML14, MPX820
SD-X12	STAND FOR MG1212, MG1214
RC-X9	REMOTE CONTROL UNIT (WIRELESS)
RC-X3	REMOTE CONTROL UNIT (WIRED)
BL100	BLANK DISK (2.8 INCH SAMPLER DISK)
FC-X80	FLIGHT CASE (AX80)
FC-X60	FLIGHT CASE (AX60)
FC-X12	FLIGHT CASE (MG1212, MG1214)
DC-X80	DUST COVER (AX80)
DC-X12	DUST COVER (MG1212, MG1214)
SC-X80	SOFT CASE (AX80)
HC-X80	SEMI-HARD CASE (AX80)
ASK40	APPRECIATION SERVICE KIT
FC-X73	FLIGHT CASE (AX73, MX73)
SL501 ~	SOUND LIBRARY
BL350	BLANK DISK (3.5 INCH MICRO FLOPPY DISK/MF2DD)
PCL100	OPTIONAL AUDIO TRIGGER KIT/INPUT × 8 (S900)

*For improvement purposes, specifications and design are subject to change without notice.*

**dbx** TYPE I  
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**MIXER/RECORDER**  
**MASTER DECK**  
**MONITOR SPEAKER**  
**SAMPLER**  
**SOUND MODULE**  
**SYNTHESIZER**  
**MASTER KEYBOARD**  
**MIDI EFFECTS**  
**SOUND LIBRARY**



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